

APPENDIX 1: MATTER 16. (3 PAGES)
STEVENAGE EXAMINATION DOCUMENT. 109.

10 Summary and Conclusions

10.1 Introduction

10.1.1 This section summarises the key findings from the analysis of the model outputs for the different model scenarios. As agreed with HCC, we have undertaken qualitative analysis of the different scenarios based on observed queues and unreleased demand from the key model zones.

10.2 2031 Do Minimum

Demand

10.2.1 The northern area of Stevenage experiences a significant increase in demand as a result of the new developments in this area. These new developments increase the traffic demand on North Road and the Lister Hospital area. The congestion issues are particularly acute in the morning peak; as a consequence, there is a significant number of unreleased vehicles from High Street (zone 2).

10.2.2 The industrial area in the west of Stevenage (zone 49) concentrates a high level of employment, and is a key trip attractor in the morning peak, and key trip generator in the evening peak. The low capacity of the roundabout that provides access to this area causes queueing on Six Hills Way eastbound in the morning peak and unreleased demand in the evening peak.

10.2.3 The GSK site is a major trip attractor in Stevenage. The demand pattern and behaviour of this zone is very similar to the industrial zone previously mentioned. Significant level of demand access the zone in the morning peak, whilst in the evening, significant level of demand egress the zone.

Network performance

10.2.4 The performance of the A1(M) section encompasses by the Stevenage model improves with the A1(M) 'all lane running' scheme. The additional main carriageway lane increases capacity and reduces congestion on the A1(M).

10.2.5 The performance of the A1(M) Junction 8 roundabout is dependent to the layout of the A1(M) upstream of Junction 8. If only three-lane are considered on this section of the A1(M), there will be capacity issues on the A1(M) southbound off-slip at Junction 8 as well as "weaving" issues. This issue can be reduced by considering four-lane for the A1(M) upstream of Junction 8.

10.2.6 Hitchin Road presents very congested conditions for all the time periods in 2031 Do Minimum scenario. A number of reasons can explain this situation:

- Significant demand increase in the northern area of Stevenage as a result of new developments.
- Lack of capacity at A1(M) Junction 8, which does not allow releasing enough vehicles coming from Hitchin Road.
- Hitchin Road – Coreys Mill Lane roundabout reduces the capacity of Hitchin Road.

10.2.7 The congested conditions on Hitchin road are particularly severe in the evening peak. Queues extend from Junction 8 to Gunnels Wood Road – Clovelly Way roundabout and eventually block the network.

10.2.8 The two consecutive mini roundabouts on North Road cause queuing along this road. The modelling shows that the mini roundabouts are not able to accommodate with the demand increase coming from North Hertfordshire. These issues are mainly due to development within North Herts which is adjacent to the Stevenage urban area.

10.2.9 Lytton Way – Fairlands Way roundabout is one of the most critical junctions in Stevenage. The roundabout has been signalised, which has improved the performance in the morning peak. However, this mitigation measure is not sufficient for the evening and Saturday peak period. It should be noted that this provisional mitigation measure should be analysed further to confirm engineering and safety feasibility.

10.2.10 2031 Do Minimum scenario includes the updated hamburger scheme for the Gunnels Wood Road – Broadhall Way roundabout. This scheme significantly improves the performance of the junction. However, temporary queues were modelled in the morning peak on Gunnels Wood Road southbound, as only one lane provides access to GSK offices. In